

**In the claims:**

For the Examiner's convenience, all pending claims are presented below with changes shown.

1. (Currently Amended) A method comprising:

eliminating one or more channels associated with at least one of analog media content and non-digital signal sources from a search for data channels, the one or more channels part of a plurality of multimedia channels in a cable network;

tuning a receiver of a broadband cable signal associated with a quadrature amplitude modulation (QAM) technique to a selected channel within the broadband cable signal;

temporarily activating adaptive equalizer logic in a QAM demodulator from operation using the QAM technique to demodulate the selected channel according to a quadrature phase shift keying (QPSK) modulation technique to position a slicer in the QAM demodulator to an appropriate quadrant in an in-phase/quadrature (I/Q) constellation;

sweeping a carrier frequency of the receiver over a carrier loop bandwidth for the receiver to attempt to obtain a channel lock on the selected channel while the receiver is activated in order to demodulate the selected channel according to the QPSK modulation technique;

if a channel lock is obtained and the selected channel is a data channel, activating the adaptive equalizer logic in the QAM demodulator to demodulate the selected channel according to the QPSK technique.

2. (Previously Presented) A method according to claim 1, wherein the selected channel is a narrow-band channel within the broadband cable signal.
3. (Canceled)
4. (Previously Presented) A method according to claim 1, wherein tuning the receiver to the selected channel comprises:
  - accessing a storage medium for a list of information channels within the broadband cable signal; and
  - selecting a channel from the list to which the receiver is tuned.
- 5-6. (Canceled)
7. (Previously Presented) A method according to claim 4, further comprising:
  - selecting a next channel from the list of information channels if a channel lock could not be obtained;
  - repeating the activating and sweeping operations to attempt to obtain a channel lock on the next selected channel; and
  - repeating the foregoing operations until a data channel is identified.
8. (Previously Presented) A method according to claim 7, further comprising:
  - updating the list of channels to promote the channel identified as a data channel to the first channel in the list.
9. (Canceled)
10. (Canceled)

Docket No.: 42P11289  
Application No.: 09/819,163

11. (Currently Amended) A computing system comprising:
- a storage medium including a plurality of executable instructions; and
  - a control unit, coupled to the storage medium, to execute at least a subset of the plurality of executable instructions to implement a data channel detection agent, wherein the data channel detection agent performs a search for data channels in several multimedia channels in a cable network by:
    - eliminating one or more channels associated with at least one of analog media content and non-digital signal sources from the search for the data channels;
    - tuning a receiver of a broadband cable signal associated with a quadrature amplitude modulation (QAM) technique to a selected channel within the broadband cable signal;
    - temporarily activating adaptive equalizer logic in a QAM demodulator from operation using the QAM technique to demodulate the selected channel according to a quadrature phase shift keying (QPSK) modulation technique to position a slicer in the QAM demodulator to an appropriate quadrant in an in-phase/quadrature (I/Q) constellation;
    - sweeping a carrier frequency of the receiver over a carrier loop bandwidth for the receiver to attempt to obtain a channel lock on the selected channel while the receiver is activated in order to demodulate the selected channel according to the QPSK modulation technique;

if a channel lock is obtained and the selected channel is a data channel, activating the adaptive equalizer logic in the QAM demodulator to demodulate the selected channel according to the QAM modulation technique.

12. (Previously Presented) A computing system according to claim 11, wherein the data channel detection agent accesses a storage medium for a list of information channels within the broadband cable signal, and selects one of the channels within which to find system information.

13. (Canceled)

14. (Previously Presented) A computing system according to claim 12, wherein the channel detection agent steps to a next channel in the list if the demodulated channel is not a data channel.

15. (Previously Presented) A computing system according to claim 14, wherein the channel detection agent updates the list to promote a channel identified as a data channel to a first channel in the list.

16. (Canceled)

17. (Previously Presented) A computing system according to claim 11, wherein the channel detection agent further performs operations comprising extracting information from the demodulated channel data to determine whether the selected channel is a data channel or a digital multimedia channel.

18. (Original) A computing system according to claim 11, wherein the computing system is a cable modem.

19. (Currently Amended) A machine accessible storage medium comprising a plurality of executable instructions which, when executed by an accessing machine, cause the machine to implement a channel detection agent to:

eliminate, from a search for data channels in several multimedia channels in a cable network, channels associated with at least one of analog media content and non-digital signal sources;

tune a receiver of a broadband cable signal associated with a quadrature amplitude modulation (QAM) technique to a selected channel within the broadband cable signal;

temporarily activate adaptive equalizer logic in a QAM demodulator from operation using the QAM technique to demodulate the selected channel according to a quadrature phase shift keying (QPSK) modulation technique to position a slicer in the QAM demodulator to an appropriate quadrant in an in-phase/quadrature (I/Q) constellation;

sweep a carrier frequency of the receiver over a carrier loop bandwidth for the receiver to attempt to obtain a channel lock on the selected channel while the receiver is activated in order to demodulate the selected channel according to the QPSK modulation technique;

if a channel lock is obtained and the selected channel is a data channel, activate the adaptive equalizer logic in the QAM demodulator to demodulate the selected channel according to the QAM modulation technique.

20. (Previously Presented) A machine accessible storage medium according to claim 19, wherein the instructions to implement the data channel detection agent include instructions to access a storage medium for a list of information channels within the broadband cable signal, and to select one of the channels within which to search for system information.

21. (Canceled)

22. (Previously Presented) A machine accessible storage medium according to claim 20, wherein the instructions to implement the channel detection agent include instructions to step the receiver to a next channel in the list if the demodulated channel is not a data channel.

23. (Canceled)

24. (Previously Presented) A machine accessible storage medium according to claim 19, wherein the instructions to update one or more operating characteristics of the cable modem include instructions to:

produce demodulated channel data carried over the selected channel; and

extract information from the demodulated channel data to determine whether the selected channel is a data channel or a digital multimedia channel.

25. (Previously Presented) The method of claim 1, wherein the determining if the selected channel is a data channel comprises:

returning the temporarily modified receiver parameters to demodulate the selected channel according to the first modulation technique to produce demodulated channel data;

extracting information from the demodulated channel data to determine whether the selected channel is a data channel or a digital multimedia channel.

26. (Previously Presented) The method of claim 25, wherein the information that is extracted comprises a program identification field (PID) in a DOSCIS protocol header.

27-29. (Canceled)